

AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions and listings of claims in the application:

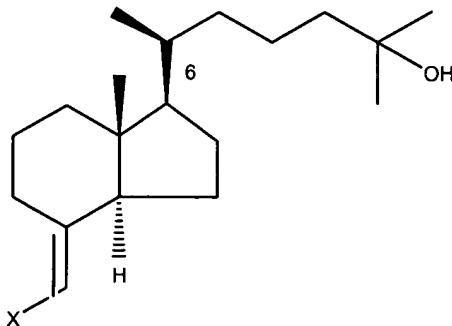
LISTING OF CLAIMS:

Claims 1-2. canceled.

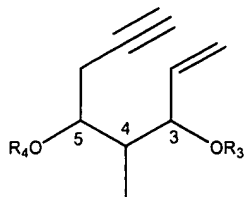
Claim 3. (previously presented): A 1,25-dihydroxy-2-methylvitamin D₃ compound, wherein the compound is

- (i) (20S)-1 α , 25-dihydroxy-2 β -methyl-3 β -vitamin D₃;
- (ii) (20S)-1 β , 25-dihydroxy-2 β -methyl-3 α -vitamin D₃;
- (iii) (20S)-1 α , 25-dihydroxy-2 α -methyl-3 β -vitamin D₃; or
- (iv) (20S)-1 α , 25-dihydroxy-2 α -methyl-3 α -vitamin D₃.

Claim 4. (currently amended): A method for producing a vitamin D₃ compound described in claim 3, comprising reacting an exo-methylene compound of formula (II):



wherein X is a bromine atom or an iodine atom, with an eneyne compound of formula (III):



wherein R_3 and R_4 are each independently a hydrogen atom or a tri (C_1 to C_7 hydrocarbon)-silyl group in the presence of a palladium catalyst, and optionally removing the protecting group of the tri (C_1 to C_7 hydrocarbon)-silyl group, and further wherein the vitamin D_3 compound is

- (i) (20S)-1 α , 25-dihydroxy-2 β -methyl-3 β -vitamin D_3 ;
- (ii) (20S)-1 β , 25-dihydroxy-2 β -methyl-3 α -vitamin D_3 ;
- (iii) (20S)-1 α , 25-dihydroxy-2 α -methyl-3 β -vitamin D_3 ; or
- (iv) (20S)-1 α , 25-dihydroxy-2 α -methyl-3 α -vitamin D_3 .